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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,104	10/12/2000	Masashi Nogawa	TIJ-28802	6438

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EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

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DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/689,104

Applicant(s)

NOGAWA, MASASHI

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 08 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is made in response to applicant's amendment filed on 01/08/03 (entered into the file wrapper as Paper No. 7). New claims 12-27 are currently pending in the application. An action follows below:

#### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features, "a discharge circuit" recited in claim 12, "a plurality of switches" recited in claim 17, and "a plurality of resistors" recited in claim 20, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

3. Claim 12 is objected to under 37 CFR 1.75(a) because although these claims meet the requirement 112/2d, i.e., the metes and bounds are determinable, however, the feature, "the voltage source", line 7, should be changed to -- said reduced voltage source --, so as to be consistent with the claimed feature, "a reduced voltage source", line 5, and with the disclosure, specifically in fig. 2 and at page 6, lines 22-25.

4. Claim 16 is objected to under 37 CFR 1.75(a) because although these claims meet the requirement 112/2d, i.e., the metes and bounds are determinable, however, the feature, "the discharge circuit comprises LEDs of one column of the matrix", lines 1-2, should be changed to -

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- said plurality of LEDs is arranged in a column of the matrix --, so as to be consistent with the claimed feature, "a plurality of LEDs", recited in claim 14, and with the disclosure, specifically in fig. 2.

5. It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims 12 and 16 above, to take into consideration these editorial situations and make changes as necessary.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 12-27 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims above, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, "a discharge circuit for coupling each of the scan lines to the voltage source at a time **when the scan line is not activating a display element**" recited in independent claim 12, lines 7-8. The disclosure, specifically in figures 2-3 and the corresponding description, page 5, lines 27-33 and page 6, lines 18-25, discloses each scan line (CL0-CL3) is coupled to the ground potential **during a prescribed time TG when the scan line is activated and the signal line is not activated**, whereby charge accumulating at a display element is discharged to reduce erroneous activation of the display element. Accordingly, the underlined

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feature above is not properly described in the application as filed, so as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Additionally to claim 21, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, “a plurality of scan line buffer circuits each coupling a scan line to the reduced voltage source when not driving a display element”. The disclosure, specifically in figure 5 and the corresponding description, page 8, lines 17-24, only discloses each of scan line buffer circuits (B0-B3) connected to a common line (CL0-CL3), a control signal (SKi) and power supply voltages ( $V_{BB}$  and  $V_S$ ). Furthermore, since the buffer circuit is not located between the scan line and the ground potential (i.e., the claimed reduced voltage source), a buffer circuit can't couple a scan line to the reduced voltage source.

Accordingly, the underlined feature above is not properly described in the application as filed, so as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

8. Claims 17 and 20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to claim 17, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, “a plurality of switches, ... source”, of claim 17. The disclosure, specifically at page 7, last second line through page 8, line 4, discloses that it is possible to provide a switch 22 and/or a constant current source 24 at each diode (MD0-MD3) in

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order to conduct the discharge operation for each common line at their respective individual timing. However, the disclosure does not contain such description and details how the discharge operation for each common line is processed individually during the horizontal scanning period, e.g., the discharge operations for all common lines are processed at the same time or at a different time, there is one or more constant current source circuits, there is one or more control signals SG and etc., so as to enable one skilled in the pertinent art to make and use the claimed invention. See MPEP 608.01(p).

Regarding to claim 20, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, “a plurality of resistors, ... source” of claim 17. The disclosure, specifically at page 7, lines 3-4, only discloses “It is also possible to connect the dummy diodes MD in multiple stages and series connect resistors”. However, the disclosure does not contain such description and details each resistor being coupled between one scan line and the reduced voltage source, as claimed, i.e., the location of resistors relative with dummy diodes MD, the current source, switch 22 and the ground potential, and how the discharge operation for each common line is processed with the presence of the resistors during the horizontal scanning period, so as to enable one skilled in the pertinent art to make and use the claimed invention. See MPEP 608.01(p).

9. As best understood, the art rejection follows below:

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claims 12-27 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's Admitted Prior Art, hereinafter AAPA.

As per claims above, as noting in figures 7-8 and the corresponding description, the claimed invention is read by AAPA as follows: AAPA discloses a LED dot matrix display comprising a circuit to reduce erroneous activation of the display element (a circuit comprising elements LED<sub>00</sub>, LED<sub>10</sub>, LED<sub>20</sub>, LED<sub>30</sub>, a switch F<sub>0</sub>, a current source J<sub>0</sub> and ground potential, specifically at fig. 7), the circuit comprising a reduced voltage source (the ground potential) and a discharge circuit (a circuit including elements LED<sub>00</sub>, LED<sub>10</sub>, LED<sub>20</sub>, LED<sub>30</sub>, a switch F<sub>0</sub> and a current source J<sub>0</sub>) including a switch F<sub>0</sub>, a current source J<sub>0</sub> and a plurality of LED<sub>00</sub>, LED<sub>10</sub>, LED<sub>20</sub> and LED<sub>30</sub> all arranged in a column of the matrix. The elements in the claims are read in the reference.

### ***Response to Arguments***

12. Applicant's argument with respect to new claims 12-27 has been considered but are moot in view of the new ground(s) of rejection. Furthermore, Applicant only stated "these new claims are clearly distinguished from the prior art described in the application", see the "REMARKS", section on page 5, but does not provides any particular claimed features which are not disclosed in AAPA.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JHN

March 13, 2003

  
BIPIN CHANDRA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600